

REMARKS/ARGUMENTS

Claims 1-15 are pending in this present application. Claims 9, 10 and 12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Bruns (German Patent No. DE 42 29 999 A1) in view of Shoichiro Toyoda et al. (U.S. Patent No. 3,226,013). Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bruns in view of Toyoda and further in view of Fanning (U.S. Patent No. 2,359,903). Claim 15 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Bruns in view of Toyota and further in view of Zabriskie (U.S. Patent No. 1,267,157). Claims 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Claims 1-8 have been allowed. Applicant respectfully traverses all rejections.

Claims 9, 10 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bruns in view of Toyoda. An obviousness analysis begins in the text of section 103 with the phrase "at the time the invention was made." For it is this phrase that guards against entry into the "tempting but forbidden zone of hindsight when analyzing the patentability of claims pursuant to that section. See Loctite Corp. v. Ultraseal Ltd., 781 F.2d 861, 873, 228 USPQ 90, 98 (Fed. Cir. 1985), overruled on other grounds by Nobelpharma AB v. Implant Innovations, Inc., 141 F.3d 1059, 46 USPQ 2d 1097 (Fed. Cir. 1998). Measuring a claimed invention against the standard established requires the often difficult but critical step of casting the mind back to the time of the invention, to

consider the thinking of one of ordinary skill in the art, guided only by the prior art references and then-accepted wisdom in the field. See, e.g. W.L. Gore & Assoc., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983). Close adherence to this methodology is especially important in the case of less technologically complex inventions, where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against the teacher." Id.

The best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. See, e.g., C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1352, 48 USPQ 2d 1225, 1232 (Fed. Cir. 1998) (describing "teaching or suggestion or motivation [to combine] as an essential evidentiary component of an obviousness holding") combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability - the essence of hindsight. See, e.g. Interconnect Planning Corp. v Feil, 774 F.2d 1132, 1138, 277 USPQ 543, 547 (Fed. Cir. 1985) ("The invention must be viewed not with the blueprint drawn by the inventor, but in the state of the art that existed at the time.") In this case, the Examiner has fallen into the hindsight trap.

Evidence of a suggestion, teaching or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some

cases, from the nature of the problem solved, although the suggestion more often comes from the teachings of the pertinent references. Rouffet, 149 F.3d at 1355. The range of sources available does not diminish the requirement for actual evidence. That showing must be clear and particular. See, e.g., C.R. Bard, 157 F.3d at 1352. Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. e.g., McElmurry v. Arkansas Power & Light Co., 995 F.2d 1576, 1578, 27 USPQ 2d 1129, 1131 (Fed. Cir. 1993) ("Mere denials and conclusory statement, however, are not sufficient to establish a genuine issue of material fact.").

All of the obvious rejections asserted by the Examiner are based on a combination of prior art references, e.g., the rotary engine of Bruns combined with the chamber wall shape of Toyoda. To justify this combination the Examiner states "[I]t would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized the epicycloidal shaped wall of the chambers as taught by Shoichiro Toyoda to improve the efficiency of the Bruns device." (Office action page 3). Rather than pointing to specific information in Toyoda that suggests the combination with the rotary engine of Bruns, the Examiner described the general functions of the chamber walls of Toyoda. Nowhere does the Examiner particularly identify any teaching, suggestion, or motivation to combine the prior art references such as the identification of the relevant art, the level of ordinary skill in the art, the nature of the problem to be solved, or any other facts or findings that might serve to support a proper obvious analysis. See, e.g., Pro-mold &

Tool, 75 F.3d 1568, 1573, 37 USPQ 2d. 1626, 1630 (Fed. Cir. 1996).

To the contrary, the Examiner's decision is based on a discussion of the ways the multiple prior art references can be combined to read on the claimed invention. (Office Action page 3). Yet this reference by reference limitation by limitation analysis fails to demonstrate how Toyoda teaches or suggests its combination with Bruns to yield the claimed invention. For example, the Examiner has not explained why, if it was obvious to make the proposed combination, that the rotary engine of Bruns (2000) did not combine the chamber wall shape of Toyoda (1965) when this option was readily available. In contrast, Bruns, as a person of ordinary skill in the art, chose to utilize circular shaped chambers. (See Fig. 8). In this respect, Bruns teaches away from the proposed combination.

A factor cutting against a motivation to combine the prior art is when the prior art teaches away from the claimed combination. A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path the Applicant took. In re Gurley, 27 F.3d 551, 31 USPQ 2d 1130, 1131 (Fed. Cir. 1994). Here, because Bruns teaches the use of cylindrical internal chambers, one skilled in the art upon reading Bruns would be led on a path divergent from that taken by the Applicant.

Accordingly, because all obviousness rejections combine Bruns and Toyoda, and because the Examiner has not particularly identified any suggest, teaching or motivation to

combine the prior art references, in addition to the disclosure of Bruns which teaches away from the proposed combination, the Examiner's conclusion of obviousness as a matter of law cannot stand.

CONCLUSION

If any issues remain that may be expeditiously addressed in a telephone interview, the Examiner is encouraged to telephone the undersigned at 515/558-0200. All fees or extensions of time believed to be due in connection with this response are attached hereto; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account 50-2098.

Respectfully submitted,



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